

EXHIBIT K

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13 Apple Inc.

14 UNITED STATES DISTRICT COURT
15 NORTHERN DISTRICT OF CALIFORNIA
16 SAN FRANCISCO DIVISION

18 COREPHOTONICS, LTD.,
19 Plaintiff,
20 v.
21 APPLE INC.,
22 Defendant.

Case No. 3:17-cv-06457-JD (lead case)
Case No. 5:18-cv-02555-JD

**DEFENDANT APPLE INC.’S FIRST SET OF
REQUESTS FOR ADMISSION TO PLAINTIFF
COREPHOTONICS, LTD. (NOS. 1-179)**

24 Pursuant to Federal Rules of Civil Procedure 26 and 34, Defendant Apple Inc. (“Apple”)
25 hereby serves Plaintiff Corephotonics, Ltd. (“Corephotonics”) the following requests for
26 admission, and requests that Corephotonics answer each request separately and fully, in writing,
27 and under oath within thirty (30) days of service hereof. These requests for admission shall be
28

1 deemed to be continuing, and Apple reserves the right to serve supplemental or additional requests.

2 **I. DEFINITIONS**

3 For the purposes of these discovery requests, the following definitions shall apply:

4 1. The use of any term in the Definitions section of these Requests for Admission is
5 understood to include any and all variations of that term necessary to bring within the scope of the
6 request all responses that might otherwise be construed to be outside of its scope.

7 2. The term “Apple” or “defendant” shall mean Apple Inc. and any other persons or
8 entities acting on their behalf, including but not limited to its predecessors and current and former
9 employees, affiliates, attorneys, accountants, consultants, advisors, agents, officers, and directors.

10 3. The term “Corephotonics,” “you,” “your,” or “plaintiff” separately refers to
11 Corephotonics and all its past and present direct and indirect parents, subsidiaries, affiliates,
12 divisions, business units, predecessors in interest, and further includes their respective past and
13 present officers, directors, agents, employees, members and representatives, and all other persons
14 acting on behalf of any of them.

15 4. The term “’291 patent” refers to U.S. Patent No. 9,185,291 and the term “’712
16 patent” refers to U.S. Patent No. 9,568,712.

17 5. The term “patents-in-suit” refers to the ’291 and ’712 patents collectively.

18 6. The term “document” shall be given the broadest possible meaning under Rule 34
19 of the Federal Rules of Civil Procedure, and includes any printed, written, recorded, or graphic
20 matter, however produced or reproduced, including the originals and all non-identical copies,
21 including but not limited to correspondence, memoranda, hand-written notes, messages, telegrams,
22 diaries, calendars, minutes, books, reports, charts, graphs, ledgers, invoices, work-sheets, receipts,
23 tax returns, computer printouts, prospectuses, financial statements, schedules, affidavits, written
24 statements, contracts, canceled checks, transcripts, statistics, surveys, magazine or newspaper
25 articles, photographs, microfiche, microfilm, video or audio tape recordings, information stored on
26 computer disc, and any other type of electronic or computerized information storage system.

27 7. The terms “relates to,” “concerning,” and “relating to” mean directly or indirectly
28 mentioning or describing, pertaining to, being connected with, or reflecting upon a stated subject

1 matter and any and all communications or documents that bear upon, constitute, contain, embody,
 2 evidence, comprises, reflect, identify, pertain to, state, comment on, respond to, describe, analyze,
 3 or are in any way relevant to that subject matter, whether directly or indirectly or in whole or in
 4 part, including without limitation documents related to the subject of inquiry or the existence of
 5 other documents relating to the subject.

6 **8.** The term “person(s)” shall mean and include, without limitation, all natural persons,
 7 male or female, and all types and kinds of business or other entities, including, but not limited to,
 8 corporations, partnerships, joint ventures, associations, and sole proprietorships and any reference
 9 to an individual person, either singularly or as part of a defined group, including that person’s
 10 employees, agents, legal representatives, non-legal representatives, personal representatives,
 11 attorneys, heirs, successors, assigns, and any other person or entity acting on the behalf of such
 12 individual person.

13 **9.** The term “including” means including but not limited to.

14 **10.** The term “each” is defined as including “every,” and the term “every” is defined as
 15 including “each.”

16 **11.** The term “any” is defined as including “all,” and the term “all” is defined as
 17 including “any.”

18 **12.** The term “communication(s)” shall mean any contact whatsoever and any
 19 transmission or exchange of words, numbers, graphic material, or other information, either orally,
 20 electronically, or in writing, whether made, received, or participated in, and includes without
 21 limitation any conversion, correspondence, letter, notes, memorandum, inter-office or intra-office
 22 correspondence, telephone call, telegraph, telegram, telex, telecopy, facsimile, electronic mail,
 23 Internet communication, telefax, cable, electronic message, tape recording, discussion, face-to-face
 24 meeting, or conference or meeting of any kind (whether in person, by audio, video, telephone, or
 25 in any other form).

26 **13.** The term “party” means any natural person, corporation, partnership, association,
 27 joint venture, government body, or other legal entity, including Plaintiff and Defendant.

28 **14.** The term “third party” means any natural person, corporation, partnership,

1 association, joint venture, government body, or other legal entity other than the Plaintiff and
 2 Defendant.

3 **15.** The terms “infringe” or “infringement” should be understood to include direct
 4 infringement, contributory infringement, inducement of infringement, literal infringement, and
 5 infringement by the doctrine of equivalents.

6 **16.** The disjunctive shall be construed as the conjunctive, and the conjunctive shall be
 7 construed as the disjunctive, and the connectives “and” and “or” shall be construed disjunctively
 8 or conjunctively as necessary to bring within the scope of the Interrogatory all responses that might
 9 otherwise be construed to be outside of its scope.

10 **17.** The use of a verb in any tense shall be construed as the use of that verb in all other
 11 tenses necessary to bring within the scope of the Interrogatory all responses that might otherwise
 12 be construed to be outside of its scope.

13 **18.** A plural noun shall be construed as a singular noun, and a singular noun shall be
 14 construed as a plural noun as necessary to bring within the scope of the Interrogatory all responses
 15 that might otherwise be construed to be outside of its scope.

16 **19.** The term “first lens element” refers to the first aspheric lens element, along the
 17 direction of the optical axis from the object side to the image side, of a lens or lens design.

18 **20.** The term “f1” refers to the focal length of a given first lens element.

19 **21.** The term “second lens element” refers to the second aspheric lens element, along
 20 the direction of the optical axis from the object side to the image side, of a lens or lens design.

21 **22.** The term “f2” refers to the focal length of a given second lens element.

22 **23.** The term “third lens element” refers to the third aspheric lens element, along the
 23 direction of the optical axis from the object side to the image side, of a lens or lens design.

24 **24.** The term “f3” refers to the focal length of a given third lens element.

25 **25.** The term “fourth lens element” refers to the fourth aspheric lens element, along the
 26 direction of the optical axis from the object side to the image side, of a lens or lens design.

27 **26.** The term “fifth lens element” refers to the fifth aspheric lens element, along the
 28 direction of the optical axis from the object side to the image side, of a lens or lens design.

1 **27.** The term “sixth lens element” refers to the sixth aspheric lens element, if any, along
 2 the direction of the optical axis from the object side to the image side, of a lens or lens design.

3 **28.** The term “total track length” or “TTL” means the length of the optical axis spacing
 4 between the object side surface of the first lens element and one of: an electronic sensor, film, and
 5 an image plane corresponding to either the electronic sensor or a film sensor.

6 **29.** The term “effective focal length” or “EFL” means the focal length of a given lens
 7 or lens design.

8 **30.** The term “image side” or “image-side” of a given lens or lens design refers to the
 9 side closer to the image plane corresponding to an electronic sensor or film sensor, along the given
 10 lens or lens design’s optical axis.

11 **31.** The term “object side” or “object-side” of a given lens or lens design refers to the
 12 side closer to the object plane.

13 **32.** The term “Iwasaki” means U.S. Patent No. 9,678,310.

14 **33.** The term “Iwasaki Application” means Japanese patent application 2013-061647.

15 **34.** The term “Example 4 of Iwasaki” means the lens design described in Iwasaki at
 16 Tables 7-8 of Iwasaki, the column labelled “Example 4” in Table 9, and Figure 4.

17 **35.** The term “Eggert” means U.S. Patent No. 3,388,956.

18 **36.** The term “Eggert Lens” means the lens design described in Eggert at Figure 2, Table
 19 (a), Table (b), column 5 lines 8-15, and column 9 lines 52-58.

20 **37.** The term “Mercado 118” means U.S. Patent No. 9,223,118.

21 **38.** The term “Mercado Table 8A-8C Lens” means the lens design described in Mercado
 22 118 at Tables 8A-8C, Figure 13, and column 18, line 65 through column 19, line 35.

23 **39.** The term “Mercado Table 3A-3C Lens” means the lens design described in Mercado
 24 118 at Tables 3A-3C, Figure 5, and column 13, line 4 through column 14 line 45.

25 **40.** The term “Parulski” means U.S. Patent No. 7,859,588.

26 **41.** The term “Golan” means U.S. Patent Publication No. 2012/0026366.

27 **42.** The term “Border” means U.S. Patent Publication No. 2008/0030592.

28 **43.** The term “Konno” means Japanese Patent Application Pub. No. JP2013106289.

1 **44.** The term “End User Customers” means customers of the device into which a small
 2 form factor camera is integrated, including mobile phones, smart phones, digital cameras, table
 3 devices, and laptops.

4 **45.** “Corephotonics Hummingbird Camera” means Corephotonics Ltd.’s
 5 “Hummingbird camera” product described at
 6 <https://web.archive.org/web/20170913081345/http://corephotonics.com/products/hummingbird/>.

7 **46.** “Corephotonics Optical Zoom Capture” means Corephotonics Ltd.’s “Optical Zoom
 8 Capture” product described at
 9 <https://web.archive.org/web/20170913081140/http://www.corephotonics.com/products/optical-zoom-capture/>.

11 **47.** “Corephotonics Video Optical Zoom” means Corephotonics Ltd.’s “Video Optical
 12 Zoom” product described at
 13 <https://web.archive.org/web/20170913081350/http://corephotonics.com/products/video-optical-zoom/>.

15 **48.** The term “Apple Personnel” means employees of Apple, excluding its outside
 16 counsel.

17 **49.** The term “Corephotonics Telephoto Lens Design” means the optical design files
 18 describing the structure of the elements of a telephoto lens designed by Corephotonics, for example,
 19 using software such as CODE V or ZEMAX. For absence of doubt, a “Corephotonics Telephoto
 20 Lens Design” is not a black box lens design.

21 **50.** The term “U.S. Patent and Trademark Office” means the United States Patent and
 22 Trademark Office including patent examiners and Patent Trial and Appeals Board judges.

23 **51.** The term “Control” means an entity possesses, directly or indirectly, the power to
 24 direct or cause the direction of the management policies of the other entity, whether through
 25 ownership of voting securities, an interest in registered capital, by contract, or otherwise.

26 **52.** The term “Corephotonics Website” means <https://corephotonics.com/>.

27 **53.** The term Samsung Global Strategy Group Website means
 28 https://sgsg.samsung.com/newpage/newpage.php?f_id=samsung_companies.

1 **54.** The term “Polaroid a520 Camera” means the camera described at
 2 <https://www.engadget.com/2006-09-19-polaroids-barebones-a520-digital-camera.html>.

3 **55.** The term “Kodak Tele Disc Camera” means the camera described at
 4 <http://kodak.3106.net/index.php?p=205&cam=1114>.

5 **56.** The term “Leica Elmar Lens” means the Leica 180mm f/4 Elmar-R camera lens
 6 described at https://wiki.l-camera-forum.com/leica-wiki.en/index.php/180mm_f/4_Elmar-R.

7 **57.** The term “Tele-Takumar Lens” means the Tele-Takumar 300mm F6.3 camera lens
 8 described at
 9 <https://web.archive.org/web/20101119025216/http://www.pentaxforums.com/lensreviews/Tele->
 10 Takumar-300mm-F6.3.html.

11 **58.** The term “Nikon Nikkor Lens” means the Nikon Nikkor 400 mm f/5.6 ED lens
 12 described at
 13 <https://web.archive.org/web/20080228001655/http://www.mir.com.my/rb/photography/companie>
 14 s/nikon/nikkoresources/preAI70/400mmf56ed.htm

15 **59.** The term “Zuiko Lens” means the E-Zuiko 400mm f/6.3 Auto-T lens described at
 16 <https://web.archive.org/web/20080222202823/http://www.mir.com.my/rb/photography/hardwares>
 17 /classics/olympusom1n2/shared/zuiko/htmls/400mm.htm.

18 **60.** The term “iPhone 5s” means the smartphone device described at
 19 <https://www.apple.com/newsroom/2013/09/10Apple-Announces-iPhone-5s-The-Most-Forward-Thinking-Smartphone-in-the-World/>.

21 **61.** The term “iPhone 4S” means the smartphone device described at
 22 <https://www.apple.com/newsroom/2011/10/04Apple-Launches-iPhone-4S-iOS-5-iCloud/>.

23 **62.** The term “iPhone 5” means the smartphone device described at
 24 <https://www.apple.com/newsroom/2012/09/12Apple-Introduces-iPhone-5/>.

25 **63.** The term “ Lens” means the camera lens described at https://wiki.l-camera-forum.com/leica-wiki.en/index.php/180mm_f/4_Elmar-R.

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1 **II. INSTRUCTIONS**

2 The following instructions apply to each specific discovery request unless explicitly stated
3 otherwise:

4 1. In construing these requests: (i) the singular shall include the plural and the plural
5 shall include the singular; (ii) masculine, feminine, or neuter pronouns shall not exclude other
6 genders; (iii) the conjunctions “and” and “or” shall be read either disjunctively or conjunctively so
7 as to bring within the scope of this request all information that might otherwise be construed to be
8 outside its scope; (iv) each of the words “all,” “each,” “any,” and “every” shall be deemed to include
9 each of the other functional words; (v) the definition of each term defined above shall be used
10 regardless of whether the term is capitalized; and (vi) the past tense of a verb used herein includes
11 the present tense and the present tense includes the past tense.

12 2. The definition of each term defined above shall be used regardless of whether the
13 term is capitalized.

14 3. If you cannot answer any request fully and completely after exercising the due
15 diligence required by law and the applicable rules to make the inquiry and secure the necessary
16 information, please so state and answer each such request to the fullest extent possible, specify the
17 portion of each request that you claim to be unable to answer fully and completely, state the facts
18 upon which you rely to support your contention that you are unable to answer the request fully and
19 completely, and state what knowledge, information or belief you have concerning the unanswered
20 portion of each such request.

21 4. These requests are to be regarded as continuing and you are requested to provide
22 any additional information by way of supplementary responses that may hereafter be obtained by
23 you or any person acting on your behalf, which will augment or otherwise modify your responses.

24 **III. REQUEST FOR ADMISSION**

25 **REQUEST FOR ADMISSION NO. 1:**

26 Admit that Example 4 of Iwasaki comprises a plurality of lens elements.

1 **REQUEST FOR ADMISSION NO. 2:**

2 Admit that Example 4 of Iwasaki comprises lens elements arranged along an optical axis.

3 **REQUEST FOR ADMISSION NO. 3:**

4 Admit that at least one lens element of Example 4 of Iwasaki has an aspheric surface.

5 **REQUEST FOR ADMISSION NO. 4:**

6 Admit that Example 4 of Iwasaki has a TTL of less than 6.5 millimeters.

7 **REQUEST FOR ADMISSION NO. 5:**

8 Admit that the U.S. Patent and Trademark Office found that Example 4 of Iwasaki has a
9 TTL of less than 6.5 millimeters. (*See IPR2020-00896, Final Written Decision, at 13-17.*)

10 **REQUEST FOR ADMISSION NO. 6:**

11 Admit that Example 4 of Iwasaki has a TTL/EFL ratio of less than 1.0.

12 **REQUEST FOR ADMISSION NO. 7:**

13 Admit that the U.S. Patent and Trademark Office found that Example 4 of Iwasaki has a
14 TTL/EFL ratio of less than 1.0. (*See IPR2020-00896, Final Written Decision, at 13-17.*)

15 **REQUEST FOR ADMISSION NO. 8:**

16 Admit that the first lens element of Example 4 of Iwasaki has a positive refractive power.

17 **REQUEST FOR ADMISSION NO. 9:**

18 Admit that the U.S. Patent and Trademark Office found that the first lens element of
19 Example 4 of Iwasaki has a positive refractive power. (*See IPR2020-00896, Final Written
20 Decision, at 13-17.*)

21 **REQUEST FOR ADMISSION NO. 10:**

22 Admit that the first lens element of Example 4 of Iwasaki has a convex object-side surface.

23 **REQUEST FOR ADMISSION NO. 11:**

24 Admit that the U.S. Patent and Trademark Office found that the first lens element of
25 Example 4 of Iwasaki has a convex object-side surface. (*See IPR2020-00896, Final Written
26 Decision, at 17-18.*)

27 **REQUEST FOR ADMISSION NO. 12:**

28 Admit that the first lens element of Example 4 of Iwasaki has a concave image-side surface.

1 **REQUEST FOR ADMISSION NO. 13:**

2 Admit that the U.S. Patent and Trademark Office found that the first lens element of
3 Example 4 of Iwasaki has a concave image-side surface. (*See* IPR2020-00896, Final Written
4 Decision, at 17-18.)

5 **REQUEST FOR ADMISSION NO. 14:**

6 Admit that the second lens element of Example 4 of Iwasaki has a negative refractive power.

7 **REQUEST FOR ADMISSION NO. 15:**

8 Admit that the U.S. Patent and Trademark Office found that the second lens element of
9 Example 4 of Iwasaki has a negative refractive power. (*See* IPR2020-00896, Final Written
10 Decision, at 17-18.)

11 **REQUEST FOR ADMISSION NO. 16:**

12 Admit that the second lens element of Example 4 of Iwasaki is a meniscus lens.

13 **REQUEST FOR ADMISSION NO. 17:**

14 Admit that the U.S. Patent and Trademark Office found that the second lens element of
15 Example 4 of Iwasaki is a meniscus lens. (*See* IPR2020-00896, Final Written Decision, at 13-17.)

16 **REQUEST FOR ADMISSION NO. 18:**

17 Admit that the second lens element of Example 4 of Iwasaki has a convex object-side
18 surface.

19 **REQUEST FOR ADMISSION NO. 19:**

20 Admit that the U.S. Patent and Trademark Office found that the second lens element of
21 Example 4 of Iwasaki has a convex object-side surface. (*See* IPR2020-00896, Final Written
22 Decision, at 13-17.)

23 **REQUEST FOR ADMISSION NO. 20:**

24 Admit that the third lens element of Example 4 of Iwasaki has a negative refractive power.

25 **REQUEST FOR ADMISSION NO. 21:**

26 Admit that the U.S. Patent and Trademark Office found that the third lens element of
27 Example 4 of Iwasaki has a negative refractive power. (*See* IPR2020-00896, Final Written
28 Decision, at 13-17.)

1 **REQUEST FOR ADMISSION NO. 22:**

2 Admit that the first lens element of Example 4 of Iwasaki has an Abbe number greater than
 3 50.

4 **REQUEST FOR ADMISSION NO. 23:**

5 Admit that the second lens element of Example 4 of Iwasaki has an Abbe number smaller
 6 than 30.

7 **REQUEST FOR ADMISSION NO. 24:**

8 Admit that Example 4 of Iwasaki satisfies the condition $1.2 \times |f_3| > |f_2| > 1.5 \times f_1$.

9 **REQUEST FOR ADMISSION NO. 25:**

10 Admit that the U.S. Patent and Trademark Office found that Example 4 of Iwasaki satisfies
 11 the condition $1.2 \times |f_3| > |f_2| > 1.5 \times f_1$. (*See* IPR2020-00896, Final Written Decision, at 13-17.)

12 **REQUEST FOR ADMISSION NO. 26:**

13 Admit that the second lens element and third lens element of Example 4 of Iwasaki have
 14 together a negative refractive power.

15 **REQUEST FOR ADMISSION NO. 27:**

16 Admit that Example 4 of Iwasaki has a fourth lens element.

17 **REQUEST FOR ADMISSION NO. 28:**

18 Admit that the U.S. Patent and Trademark Office found that Example 4 of Iwasaki has a
 19 fourth lens element. (*See* IPR2020-00896, Final Written Decision, at 13-17.)

20 **REQUEST FOR ADMISSION NO. 29:**

21 Admit that Example 4 of Iwasaki has a fifth lens element.

22 **REQUEST FOR ADMISSION NO. 30:**

23 Admit that the U.S. Patent and Trademark Office found that Example 4 of Iwasaki has a
 24 fifth lens element. (*See* IPR2020-00896, Final Written Decision, at 13-17.)

25 **REQUEST FOR ADMISSION NO. 31:**

26 Admit that Example 4 of Iwasaki has exactly five lens elements.

27 **REQUEST FOR ADMISSION NO. 32:**

28 Admit that You were aware of Iwasaki prior to July 4, 2013.

1 **REQUEST FOR ADMISSION No. 33:**

2 Admit that You were not aware of Iwasaki prior to July 4, 2013.

3 **REQUEST FOR ADMISSION No. 34:**

4 Admit that You were aware of the Iwasaki Application prior to July 4, 2013.

5 **REQUEST FOR ADMISSION No. 35:**

6 Admit that You were not aware of the Iwasaki Application prior to July 4, 2013.

7 **REQUEST FOR ADMISSION No. 36:**

8 Admit that the U.S. Patent and Trademark Office found that Claims 15 and 16 of the '712
9 patent are anticipated by Eggert.

10 **REQUEST FOR ADMISSION No. 37:**

11 Admit that Corephotonics did not appeal the determination of the U.S. Patent and
12 Trademark Office that Claim 15 and 16 of the '712 patent are anticipated by Eggert.

13 **REQUEST FOR ADMISSION No. 38:**

14 Admit that the Eggert Lens comprises a plurality of refractive lens elements arranged along
15 an optical axis.

16 **REQUEST FOR ADMISSION No. 39:**

17 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens comprises "a
18 plurality of refractive lens elements arranged along an optical axis." (See IPR 2018-01146, Final
19 Written Decision at 30-31.)

20 **REQUEST FOR ADMISSION No. 40:**

21 Admit that the Eggert Lens has a total track length smaller than its effective focal length.

22 **REQUEST FOR ADMISSION No. 41:**

23 Admit that the Eggert Lens has a TTL/EFL ratio of less than 1.0.

24 **REQUEST FOR ADMISSION No. 42:**

25 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens "has an
26 effective focal length (EFL) and a total track length (TTL) smaller than the effective focal length
27 (EFL)." (See IPR 2018-01146, Final Written Decision at 31-33.)

28

1 **REQUEST FOR ADMISSION No. 43:**

2 Admit that the first lens element of the Eggert Lens has a positive refractive power.

3 **REQUEST FOR ADMISSION No. 44:**

4 Admit that the U.S. Patent and Trademark Office found that the first lens element of the
5 Eggert Lens has a positive refractive power. (*See IPR 2018-01146, Final Written Decision at 34-*
6 *35.*)

7 **REQUEST FOR ADMISSION No. 45:**

8 Admit that the second lens element and third lens element of the Eggert Lens have together
9 a negative refractive power.

10 **REQUEST FOR ADMISSION No. 46:**

11 Admit that the U.S. Patent and Trademark Office found that the second lens element and
12 third lens element of the Eggert Lens have together a negative refractive power. (*See IPR 2018-*
13 *01146, Final Written Decision at 34-35.*)

14 **REQUEST FOR ADMISSION No. 47:**

15 Admit that the Eggert Lens has a fourth lens element.

16 **REQUEST FOR ADMISSION No. 48:**

17 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens has a fourth
18 lens element. (*See IPR 2018-01146, Final Written Decision at 34-35.*)

19 **REQUEST FOR ADMISSION No. 49:**

20 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens has a fifth lens
21 element. (*See IPR 2018-01146, Final Written Decision at 34-35.*)

22 **REQUEST FOR ADMISSION No. 50:**

23 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens discloses
24 ““[T]he plurality of refractive lens elements comprising, in order from an object plane to an image
25 plane along the optical axis, a first lens element having positive optical power, a pair of second and
26 third lens elements having together a negative optical power, and a combination of fourth and fifth
27 lens elements.” (*See IPR 2018-01146, Final Written Decision at 34-35.*)

28

1 **REQUEST FOR ADMISSION NO. 51:**

2 Admit that, in the Eggert Lens, the fourth lens element is separated from the third lens
3 element by an air gap of greater than TTL/5.

4 **REQUEST FOR ADMISSION NO. 52:**

5 Admit that the U.S. Patent and Trademark Office found that the Eggert Lens discloses “the
6 fourth lens element separated from the third lens element by an air gap greater than TTL/5.” (*See*
7 IPR 2018-01146, Final Written Decision at 36.)

8 **REQUEST FOR ADMISSION NO. 53:**

9 Admit that the first lens element of the Eggert Lens has an Abbe number greater than 50.

10 **REQUEST FOR ADMISSION NO. 54:**

11 Admit that the U.S. Patent and Trademark Office found that the first lens element of the
12 Eggert Lens has an Abbe number greater than 50. (*See* IPR 2018-01146, Final Written Decision at
13 36-37.)

14 **REQUEST FOR ADMISSION NO. 55:**

15 Admit that the second lens element of the Eggert Lens has an Abbe number smaller than
16 30.

17 **REQUEST FOR ADMISSION NO. 56:**

18 Admit that the U.S. Patent and Trademark Office found that the second lens element of the
19 Eggert Lens has an Abbe number smaller than 30. (*See* IPR 2018-01146, Final Written Decision
20 at 36-37.)

21 **REQUEST FOR ADMISSION NO. 57:**

22 Admit that You were aware of Eggert prior to July 4, 2013.

23 **REQUEST FOR ADMISSION NO. 58:**

24 Admit that You were not aware of Eggert prior to July 4, 2013.

25 **REQUEST FOR ADMISSION NO. 59:**

26 Admit that the Mercado Table 8A-8C Lens comprises a plurality of lens elements.

27 **REQUEST FOR ADMISSION NO. 60:**

28 Admit that the Mercado Table 8A-8C Lens comprises lens elements arranged along an

1 optical axis.

2 **REQUEST FOR ADMISSION NO. 61:**

3 Admit that at least one lens element of the Mercado Table 8A-8C Lens has an aspheric
4 surface.

5 **REQUEST FOR ADMISSION NO. 62:**

6 Admit that the Mercado Table 8A-8C Lens has a TTL of less than 6.5 millimeters.

7 **REQUEST FOR ADMISSION NO. 63:**

8 Admit that the Mercado Table 8A-8C Lens has a TTL/EFL ratio of less than 1.0.

9 **REQUEST FOR ADMISSION NO. 64:**

10 Admit that the first lens element of the Mercado Table 8A-8C Lens has a positive refractive
11 power.

12 **REQUEST FOR ADMISSION NO. 65:**

13 Admit that the first lens element of the Mercado Table 8A-8C Lens has a convex object-
14 side surface.

15 **REQUEST FOR ADMISSION NO. 66:**

16 Admit that the first lens element of the Mercado Table 8A-8C Lens has a concave image-
17 side surface.

18 **REQUEST FOR ADMISSION NO. 67:**

19 Admit that the first lens element of the Mercado Table 8A-8C Lens has a convex image-
20 side surface.

21 **REQUEST FOR ADMISSION NO. 68:**

22 Admit that the second lens element of the Mercado Table 8A-8C Lens has a negative
23 refractive power.

24 **REQUEST FOR ADMISSION NO. 69:**

25 Admit that the second lens element of the Mercado Table 8A-8C Lens is a meniscus lens.

26 **REQUEST FOR ADMISSION NO. 70:**

27 Admit that the second lens element of the Mercado Table 8A-8C Lens has a convex object-
28 side surface.

1 **REQUEST FOR ADMISSION No. 71:**

2 Admit that the third lens element of the Mercado Table 8A-8C Lens has a negative refractive
3 power.

4 **REQUEST FOR ADMISSION No. 72:**

5 Admit that the first lens element of the Mercado Table 8A-8C Lens has an Abbe number
6 greater than 50.

7 **REQUEST FOR ADMISSION No. 73:**

8 Admit that the second lens element of the Mercado Table 8A-8C Lens has an Abbe number
9 smaller than 30.

10 **REQUEST FOR ADMISSION No. 74:**

11 Admit that the Mercado Table 8A-8C Lens satisfies the condition $1.2 \times |f_3| > |f_2| > 1.5 \times f_1$.

12 **REQUEST FOR ADMISSION No. 75:**

13 Admit that the second lens element and third lens element of the Mercado Table 8A-8C
14 Lens have together a negative refractive power.

15 **REQUEST FOR ADMISSION No. 76:**

16 Admit that the Mercado Table 8A-8C Lens has a fourth lens element.

17 **REQUEST FOR ADMISSION No. 77:**

18 Admit that the Mercado Table 8A-8C Lens has a fifth lens element.

19 **REQUEST FOR ADMISSION No. 78:**

20 Admit that, in the Mercado Table 8A-8C Lens, the fourth lens element is separated from
21 the third lens element by an air gap of greater than TTL/5.

22 **REQUEST FOR ADMISSION No. 79:**

23 Admit that the Mercado Table 3A-3C Lens has a positive refractive power.

24 **REQUEST FOR ADMISSION No. 80:**

25 Admit that the Mercado Table 3A-3C Lens has a convex object-side surface.

26 **REQUEST FOR ADMISSION No. 81:**

27 Admit that the Mercado Table 3A-3C Lens has a concave image-side surface.

28

1 **REQUEST FOR ADMISSION NO. 82:**

2 Admit that the first lens element of the Mercado Table 3A-3C Lens has a convex image-
3 side surface.

4 **REQUEST FOR ADMISSION NO. 83:**

5 Admit that the second lens element of the Mercado Table 3A-3C Lens has a negative
6 refractive power.

7 **REQUEST FOR ADMISSION NO. 84:**

8 Admit that the second lens element of the Mercado Table 3A-3C Lens is a meniscus lens.

9 **REQUEST FOR ADMISSION NO. 85:**

10 Admit that the second lens element of the Mercado Table 3A-3C Lens has a convex object-
11 side surface.

12 **REQUEST FOR ADMISSION NO. 86:**

13 Admit that the third lens element of the Mercado Table 3A-3C Lens has a negative refractive
14 power.

15 **REQUEST FOR ADMISSION NO. 87:**

16 Admit that the first lens element of the Mercado Table 3A-3C Lens has an Abbe number
17 greater than 50.

18 **REQUEST FOR ADMISSION NO. 88:**

19 Admit that the second lens element of the Mercado Table 3A-3C Lens has an Abbe number
20 smaller than 30.

21 **REQUEST FOR ADMISSION NO. 89:**

22 Admit that the Mercado Table 3A-3C Lens satisfies the condition $1.2 \times |f_3| > |f_2| > 1.5 \times f_1$.

23 **REQUEST FOR ADMISSION NO. 90:**

24 Admit that the second lens element and third lens element of the Mercado Table 3A-3C
25 Lens have together a negative refractive power.

26 **REQUEST FOR ADMISSION NO. 91:**

27 Admit that the Mercado Table 3A-3C Lens has a fourth lens element.

28

1 **REQUEST FOR ADMISSION NO. 92:**

2 Admit that the Mercado Table 3A-3C Lens has a fifth lens element.

3 **REQUEST FOR ADMISSION NO. 93:**

4 Admit that, in the Mercado Table 3A-3C Lens, the fourth lens element is separated from
5 the third lens element by an air gap of greater than TTL/5.

6 **REQUEST FOR ADMISSION NO. 94:**

7 Admit that You were aware of Parulski before June 13, 2013.

8 **REQUEST FOR ADMISSION NO. 95:**

9 Admit that You were not aware of Parulski before June 13, 2013.

10 **REQUEST FOR ADMISSION NO. 96:**

11 Admit that You were aware of Golan before June 13, 2013.

12 **REQUEST FOR ADMISSION NO. 97:**

13 Admit that You were not aware of Golan before June 13, 2013.

14 **REQUEST FOR ADMISSION NO. 98:**

15 Admit that You were aware of Border before June 13, 2013.

16 **REQUEST FOR ADMISSION NO. 99:**

17 Admit that You were not aware of Border before June 13, 2013.

18 **REQUEST FOR ADMISSION NO. 100:**

19 Admit that You were aware of Konno before June 13, 2013.

20 **REQUEST FOR ADMISSION NO. 101:**

21 Admit that You were not aware of Konno before June 13, 2013.

22 **REQUEST FOR ADMISSION NO. 102:**

23 Admit that You were aware of the Kodak V570 Camera before the July 4, 2013.

24 **REQUEST FOR ADMISSION NO. 103:**

25 Admit that You were not aware of the Kodak V570 Camera before the July 4, 2013.

26 **REQUEST FOR ADMISSION NO. 104:**

27 Admit that Corephotonics never sold a product to End User Customers.

28

1 **REQUEST FOR ADMISSION NO. 105:**

2 Admit that Corephotonics never sold a product to End User Customers.

3 **REQUEST FOR ADMISSION NO. 106:**

4 Admit that a camera based on the Corephotonics Hummingbird Camera reference design
5 has not been incorporated into a product on sale to End User Customers.

6 **REQUEST FOR ADMISSION NO. 107:**

7 Admit that a camera based on the Corephotonics Hummingbird Camera reference design
8 has been incorporated into a product on sale to End User Customers.

9 **REQUEST FOR ADMISSION NO. 108:**

10 Admit that Corephotonics Optical Zoom Capture has not been incorporated into a product
11 on sale to End User Customers.

12 **REQUEST FOR ADMISSION NO. 109:**

13 Admit that Corephotonics Optical Zoom Capture has been incorporated into a product on
14 sale to End User Customers.

15 **REQUEST FOR ADMISSION NO. 110:**

16 Admit that Corephotonics Video Optical Zoom has not been incorporated into a product on
17 sale to End User Customers.

18 **REQUEST FOR ADMISSION NO. 111:**

19 Admit that Corephotonics Video Optical Zoom has been incorporated into a product on sale
20 to End User Customers.

21 **REQUEST FOR ADMISSION NO. 112:**

22 Admit that Apple did not receive source code from Corephotonics for any still mode fusion
23 functionality prior to November 6, 2017.

24 **REQUEST FOR ADMISSION NO. 113:**

25 Admit that Apple did not receive source code from Corephotonics for any video mode
26 smooth transition functionality prior to November 6, 2017.

27 **REQUEST FOR ADMISSION NO. 114:**

28 Admit that Apple did not receive from Corephotonics a Corephotonics Telephoto Lens

1 Design prior to November 6, 2017.

2 **REQUEST FOR ADMISSION NO. 115:**

3 Admit that Samsung Electronics Benelux B.V. acquired You.

4 **REQUEST FOR ADMISSION NO. 116:**

5 Admit that Samsung Electronics Benelux B.V. Controls You.

6 **REQUEST FOR ADMISSION NO. 117:**

7 Admit that Samsung Electronics Benelux B.V. does not Control You.

8 **REQUEST FOR ADMISSION NO. 118:**

9 Admit that Samsung Electronics, Co., Ltd. Controls You.

10 **REQUEST FOR ADMISSION NO. 119:**

11 Admit that Samsung Electronics, Co., Ltd. does not Control You.

12 **REQUEST FOR ADMISSION NO. 120:**

13 Admit that Samsung Group Controls You.

14 **REQUEST FOR ADMISSION NO. 121:**

15 Admit that Samsung Group does not Control You.

16 **REQUEST FOR ADMISSION NO. 122:**

17 Admit that Samsung Electronics, Co., Ltd. Controls Samsung Electronics Benelux B.V.

18 **REQUEST FOR ADMISSION NO. 123:**

19 Admit that Samsung Electronics, Co., Ltd. does not Control Samsung Electronics Benelux
20 B.V.

21 **REQUEST FOR ADMISSION NO. 124:**

22 Admit that Samsung Group Controls Samsung Electronics Benelux B.V.

23 **REQUEST FOR ADMISSION NO. 125:**

24 Admit that Samsung Group does not Control Samsung Electronics Benelux B.V.

25 **REQUEST FOR ADMISSION NO. 126:**

26 Admit that Samsung Group Controls Samsung Electronics, Co., Ltd.

27 **REQUEST FOR ADMISSION NO. 127:**

28 Admit that Samsung Group does not Control Samsung Electronics, Co., Ltd.

1 **REQUEST FOR ADMISSION NO. 128:**

2 Admit that Samsung Electronics, Co., Ltd. Controls Samsung Electro-Mechanics Co., Ltd.

3 **REQUEST FOR ADMISSION NO. 129:**

4 Admit that Samsung Electronics, Co., Ltd. does not Control Samsung Electro-Mechanics
5 Co., Ltd.

6 **REQUEST FOR ADMISSION NO. 130:**

7 Admit that Samsung Group Controls Samsung Electro-Mechanics Co., Ltd.

8 **REQUEST FOR ADMISSION NO. 131:**

9 Admit that Samsung Group does not Control Samsung Electro-Mechanics Co., Ltd.

10 **REQUEST FOR ADMISSION NO. 132:**

11 Admit that Samsung Electronics, Co., Ltd. Controls You and Samsung Electro-Mechanics
12 Co., Ltd.

13 **REQUEST FOR ADMISSION NO. 133:**

14 Admit that Samsung Electronics, Co., Ltd. does not Control You and Samsung Electro-
15 Mechanics Co., Ltd.

16 **REQUEST FOR ADMISSION NO. 134:**

17 Admit that Samsung Electronics Co., Ltd. is the holder of 100% ownership in Samsung
18 Electronics Benelux B.V.

19 **REQUEST FOR ADMISSION NO. 135:**

20 Admit that Samsung Electronics Co., Ltd. is the holder of 100% ownership in You.

21 **REQUEST FOR ADMISSION NO. 136:**

22 Admit that Samsung Electronics Co., Ltd. is the holder of 100% ownership of the voting
23 rights in Samsung Electronics Benelux B.V..

24 **REQUEST FOR ADMISSION NO. 137:**

25 Admit that Samsung Electronics Benelux B.V. is the holder of 100% ownership of the
26 voting rights in You.

27 **REQUEST FOR ADMISSION NO. 138:**

28 Admit that You are a subsidiary of Samsung Electronics Co., Ltd.

1 **REQUEST FOR ADMISSION NO. 139:**

2 Admit that You are an affiliate of the Samsung Group as defined under Korea's Monopoly
3 Regulation and Fair Trade Act.

4 **REQUEST FOR ADMISSION NO. 140:**

5 Admit that Samsung Electro-Mechanics Co., Ltd. is an affiliate of the Samsung Group as
6 defined under Korea's Monopoly Regulation and Fair Trade Act.

7 **REQUEST FOR ADMISSION NO. 141:**

8 Admit that Samsung Electronics Co., Ltd. has significant influence on Samsung Electro-
9 Mechanics Co., Ltd.

10 **REQUEST FOR ADMISSION NO. 142:**

11 Admit that Samsung Electronics Co., Ltd. does not have significant influence on Samsung
12 Electro-Mechanics Co., Ltd.

13 **REQUEST FOR ADMISSION NO. 143:**

14 Admit that on the Corephotonics Website, Corephotonics is identified as "A SAMSUNG
15 COMPANY[.]"

16 **REQUEST FOR ADMISSION NO. 144:**

17 Admit that Samsung Electronics Co., Ltd. and Samsung Electro-Mechanics Co., Ltd. are
18 listed together on a page of "Affiliate Companies" on the Samsung Global Strategy Group Website.

19 **REQUEST FOR ADMISSION NO. 145:**

20 Admit that there are one or more individuals who are both an officer or director of You and
21 an officer or director of Samsung Electronics Benelux B.V.

22 **REQUEST FOR ADMISSION NO. 146:**

23 Admit that there are no individuals who are both an officer or director of You and an officer
24 or director of Samsung Electronics Benelux B.V.

25 **REQUEST FOR ADMISSION NO. 147:**

26 Admit that there are one or more individuals who are both an officer or director of You and
27 an officer or director of Samsung Electronics Co., Ltd.

28

1 **REQUEST FOR ADMISSION NO. 148:**

2 Admit that there are no individuals who are both an officer or director of You and an officer
3 or director of Samsung Electronics Co., Ltd.

4 **REQUEST FOR ADMISSION NO. 149:**

5 Admit that there are one or more individuals who are both an officer or director of You and
6 an officer or director of Samsung Group.

7 **REQUEST FOR ADMISSION NO. 150:**

8 Admit that there are no individuals who are both an officer or director of You and an officer
9 or director of Samsung Group.

10 **REQUEST FOR ADMISSION NO. 151:**

11 Admit that there are one or more individuals who are both an officer or director of Samsung
12 Electronics Co., Ltd and an officer or director of Samsung Electronics Benelux B.V.

13 **REQUEST FOR ADMISSION NO. 152:**

14 Admit that there are no individuals who are both an officer or director of Samsung
15 Electronics Co., Ltd and an officer or director of Samsung Electronics Benelux B.V.

16 **REQUEST FOR ADMISSION NO. 153:**

17 Admit that there are one or more individuals who are both an officer or director of Samsung
18 Group and an officer or director of Samsung Electronics Co., Ltd.

19 **REQUEST FOR ADMISSION NO. 154:**

20 Admit that there are no individuals who are both an officer or director of Samsung Group
21 and an officer or director of Samsung Electronics Co., Ltd.

22 **REQUEST FOR ADMISSION NO. 155:**

23 Admit that there are one or more individuals who are both an officer or director of Samsung
24 Electro-Mechanics Co., Ltd. and an officer or director of Samsung Electronics Co., Ltd.

25 **REQUEST FOR ADMISSION NO. 156:**

26 Admit that there are no individuals who are both an officer or director of Samsung Electro-
27 Mechanics Co., Ltd. and an officer or director of Samsung Electronics Co., Ltd.

28

1 **REQUEST FOR ADMISSION NO. 157:**

2 Admit that there are one or more individuals who are both an officer or director of Samsung
3 Electro-Mechanics Co., Ltd. and an officer or director of Samsung Group.

4 **REQUEST FOR ADMISSION NO. 158:**

5 Admit that there are no individuals who are both an officer or director of Samsung Electro-
6 Mechanics Co., Ltd. and an officer or director of Samsung Group.

7 **REQUEST FOR ADMISSION NO. 159:**

8 Admit that the Polaroid a520 Camera was on sale prior to July 4, 2013.

9 **REQUEST FOR ADMISSION NO. 160:**

10 Admit that the Polaroid a520 Camera qualifies as prior art to the '712 Patent under 35 U.S.C.
11 102((a)(1)).

12 **REQUEST FOR ADMISSION NO. 161:**

13 Admit that the Kodak Tele Disc Camera was on prior to July 4, 2013.

14 **REQUEST FOR ADMISSION NO. 162:**

15 Admit that the Kodak Tele Disc Camera qualifies as prior art to the '712 Patent under 35
16 U.S.C. 102((a)(1)).

17 **REQUEST FOR ADMISSION NO. 163:**

18 Admit that the Leica Elmar Lens was on sale prior to July 4, 2013.

19 **REQUEST FOR ADMISSION NO. 164:**

20 Admit that the Leica Elmar Lens qualifies as prior art to the '712 Patent under 35 U.S.C.
21 102((a)(1)).

22 **REQUEST FOR ADMISSION NO. 165:**

23 Admit that the Tele-Takumar Lens was on sale prior to July 4, 2013.

24 **REQUEST FOR ADMISSION NO. 166:**

25 Admit that the Tele-Takumar Lens qualifies as prior art to the '712 Patent under 35 U.S.C.
26 102((a)(1)).

27 **REQUEST FOR ADMISSION NO. 167:**

28 Admit that the Nikon Nikkor Lens was on sale prior to July 4, 2013.

1 **REQUEST FOR ADMISSION NO. 168:**

2 Admit that the Nikon Nikkor Lens qualifies as prior art to the '712 Patent under 35 U.S.C.
3 102((a)(1)).

4 **REQUEST FOR ADMISSION NO. 169:**

5 Admit that the Zuiko Lens was on sale prior to July 4, 2013.

6 **REQUEST FOR ADMISSION NO. 170:**

7 Admit that the Zuiko Lens qualifies as prior art to the '712 Patent under 35 U.S.C.
8 102((a)(1)).

9 **REQUEST FOR ADMISSION NO. 171:**

10 Admit that the iPhone 4S was on sale prior to July 4, 2013.

11 **REQUEST FOR ADMISSION NO. 172:**

12 Admit that the iPhone 4S qualifies as prior art to the '712 Patent under 35 U.S.C. 102((a)(1)).

13 **REQUEST FOR ADMISSION NO. 173:**

14 Admit that the iPhone 5 was on sale prior to July 4, 2013.

15 **REQUEST FOR ADMISSION NO. 174:**

16 Admit that the iPhone 5 qualifies as prior art to the '712 Patent under 35 U.S.C. 102((a)(1)).

17 **REQUEST FOR ADMISSION NO. 175:**

18 Admit that the iPhone 5S was on sale prior to June 20, 2014.

19 **REQUEST FOR ADMISSION NO. 176:**

20 Admit that the iPhone 5S qualifies as prior art to the '712 Patent under 35 U.S.C. 102((a)(1)).

21 **REQUEST FOR ADMISSION NO. 177:**

22 Admit that Corephotonics has not provided to Apple Personnel any source code for still
23 mode fusion functionality.

24 **REQUEST FOR ADMISSION NO. 178:**

25 Admit that Corephotonics has not provided to Apple Personnel any source code for video
26 mode smooth transition functionality.

27 **REQUEST FOR ADMISSION NO. 179:**

28 Admit that Corephotonics has not provided to Apple Personnel Corephotonics Telephoto

1 Lens Design.

2 Dated: September 28, 2023

3 */s/ Heidi Keefe*
4 COOLEY LLP
5 HEIDI KEEFE (176960)
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20 1299 Pennsylvania Avenue
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22 Washington, DC 20004-2400
23 Telephone: (202) 842-7800
24 Facsimile: (202) 842-7899

25 *Attorneys for Defendant Apple Inc.*

CERTIFICATE OF SERVICE

I am a citizen of the United States and a resident of the State of California. I am employed in Santa Clara County, State of California, in the office of a member of the bar of this Court, at whose direction the service was made. I am over the age of eighteen years, and not a party to the within action. My business address is Cooley LLP, 3175 Hanover Street, Palo Alto, CA 94306. On the date set forth below I served the attached document(s) in the manner described below:

(BY ELECTRONIC MAIL) I am personally and readily familiar with the business practice of Cooley LLP for the preparation and processing of documents in portable document format (PDF) for e-mailing, and I caused said documents to be prepared in PDF and then served by electronic mail to the parties listed below.

on the following part(ies) in this action:

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Attorneys for Plaintiff Corephotonics, Ltd.

Executed on September 28, 2023, at Palo Alto, California.

/s/ *Tracy Gibbs*